Geographic Spill Response Plan Update (GSRP) Phase II Update

April 19th, 2023

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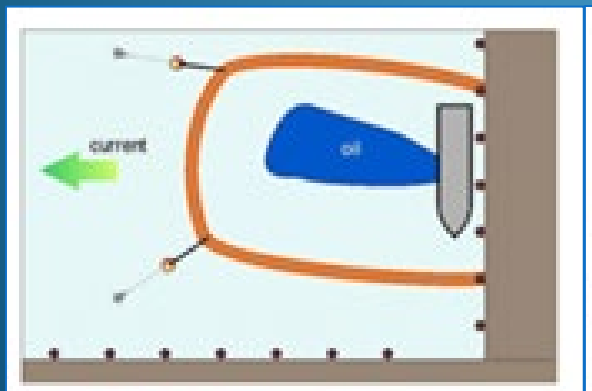
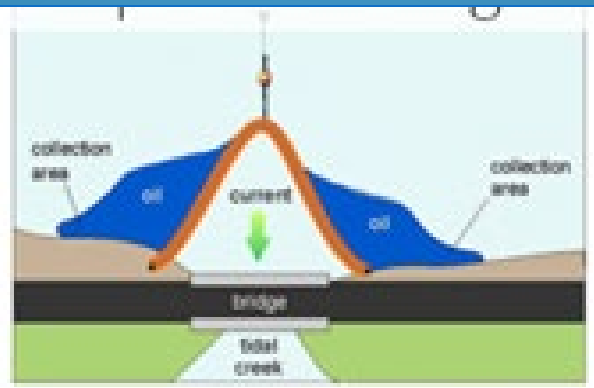


Containment



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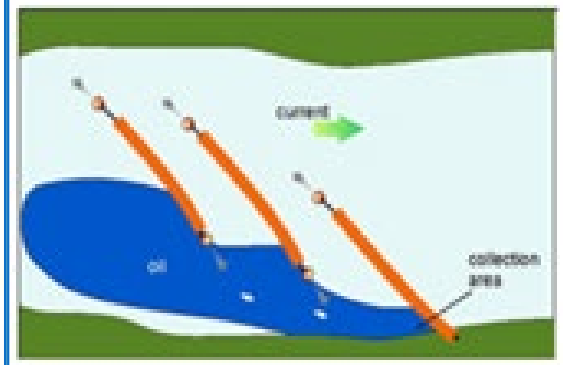


Diversion

Overview

- **GSRP Phase II Goal**
  - *To develop an Emergency Response Plan for spills that may impact the source area and other drinking water resources above the Medford Water Commission intake (pilot area).*

Detail Overview

- *Identify and map response strategies to implement to protect critical areas in the event of a spill entering the Rogue River*
- *Prepare for plan implementation*
  - *Contact list*
  - *Define roles and responsibilities (chain of command)*
  - *Training*
  - *Compile resources and supplies*

How we are getting there?

- *Contact list completed (Phase I)*
- *Identifying and prioritizing sites*
- *Identifying and prioritizing threats*
- *Developing general and site specific response strategies*
- *Testing and refining plan concepts*
- *Securing sites for use*
- *Planning for sites (e.g., equipment needs, training, etc.)*
- *Completing the plan (online and hard copy)*

Site Identification

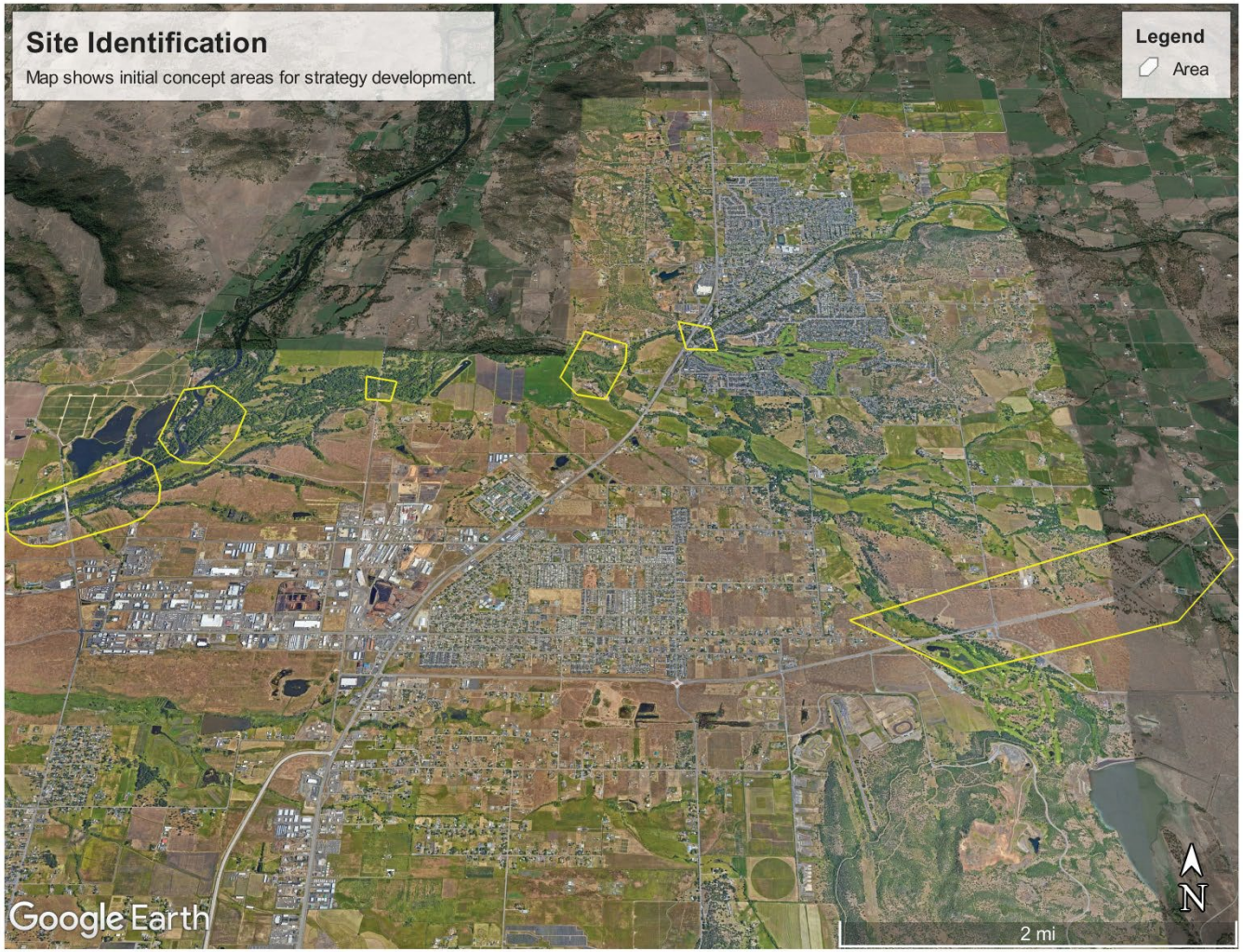
Key/Critical Features

- Water Intake Locations
- Endangered Species Habitat
- Wetlands
- Springs (Big Butte)
- Irrigation and other Infrastructure
- Water Quality Concerns
- Drinking Water Source Areas
- Proximity to threats (e.g., railroads near water)
- Sensitive/High Value Resources

Site Features (plan)

- River Access/Boat Launch
- Anchor Points
- Land Access (public vs private)
- Possible Staging Areas

Map Exercise - Identification



Primary versus Secondary location

Primary

- Critical areas
- Major lines of defense
- Comprehensive response strategies
- Resources on site or in close proximity

Secondary

- Quick response
- Smaller areas geographically
- Slow/stop spill
- More limited in strategies and resources
- In between primary areas

Prioritization

Primary

Information	*Description*	*Point(s)*
Critical junctions	Critical junctions (e.g., tributaries) entering upstream	1
Number of crossings (road)	Number of roads crossings upstream	1
Number of threat pathways	More than 3 threat pathways (e.g., irrigation canals, stormdrains, tribs, ponds)	1
Mainstem Rogue	Site is located on the mainstem of the Rogue River	1
Most Critical Sites	Designated as a critical location by RDWP and/or GRP Project Team or local knowledge	3
Number of threats	More than 3 identified threats	2
Protecting Downstream Resources	Protecting critical downstream resources (cultural, water qiuality, insfrastructure, threatened and endangered species)	2
Material Storage Location	Potential or actual location where materials will be stored for deployment.	2
TES species and TES Habitat		1
Vernal pools		1
Local Significance	Site was previously identified as a priority watershed or confluence (e.g., in a local plan or assessment)	1
Time of Travel	Less than one hour to the MWC intake	1
Springs	Priority Spring to Protect	1
Sensitive Resources	General category to identify additional items of importance	1
Boat launch/ river access		1

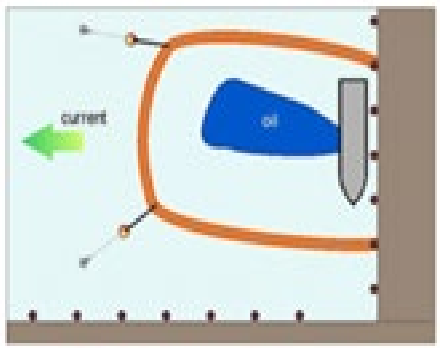
Prioritization

Secondary	
Information	***Description***
Location	In between two priority areas. Secondary areas are to be located in between primary areas (there may be multiple), on smaller tributaries for
Size	Smaller areas. More limited options for full implementation including storage, access, anchor
Rapid Strategy Deployment	Response strategies can be implemented quicker to divert, slow, and protect critical areas prior to
Boat launch/ river access	

Threats – Focus on spills*

- Location (from where?)
- Resources at risk
- Strategies to employ and locations

Response Strategies – What to do?



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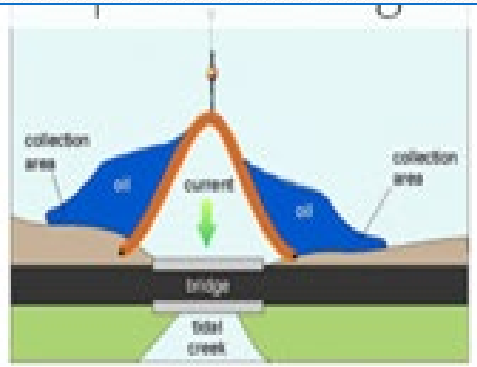

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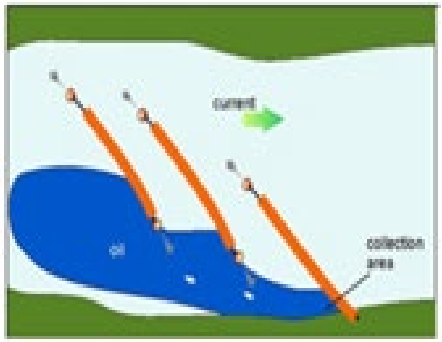


Diversion

Collection: Absorption

Collection: Skimming

Preliminary Strategies Draft List

Specific Control and Response Strategies

Strategy or Need	***Category or Categories***	***Description***
Boom Deployment	Diversion, Exclusion, or Containment	Areas for deploying booms. Approximate location and layout as shown.
Absorption Area	Collection	Materials are absorbed from collection area (blue in diagrams)
Anchor Point (for booms)	NA	Identified points for securing booms.
Skimming	Collection	Materials are skimmed from collection area (blue in diagrams)
Early Warning System (location)	Monitoring	Monitoring location. Type of location will be detailed in report. May be a visual monitoring location, photo/camera, or a to be determined device (e.g., sonde).
Staging Area	Staging Area	Area where materials can be stored. Materials may be stored onsite (trailer) or at a central location for distribution.
Water Access Point	Access	Primarily boat launches for assistance in deploying control methods. May also include areas accessible from river aor stream banks.
Road Access	Acess	Access for equipment for storage and to deploy via passing to a boat, from shore, or another identified method.
Containment Area	Containment	Areas for containing spills for collection.
Flow Diversion	Diversion	Areas where managing flow volumes and/or direction is possible.

Site Identification Example

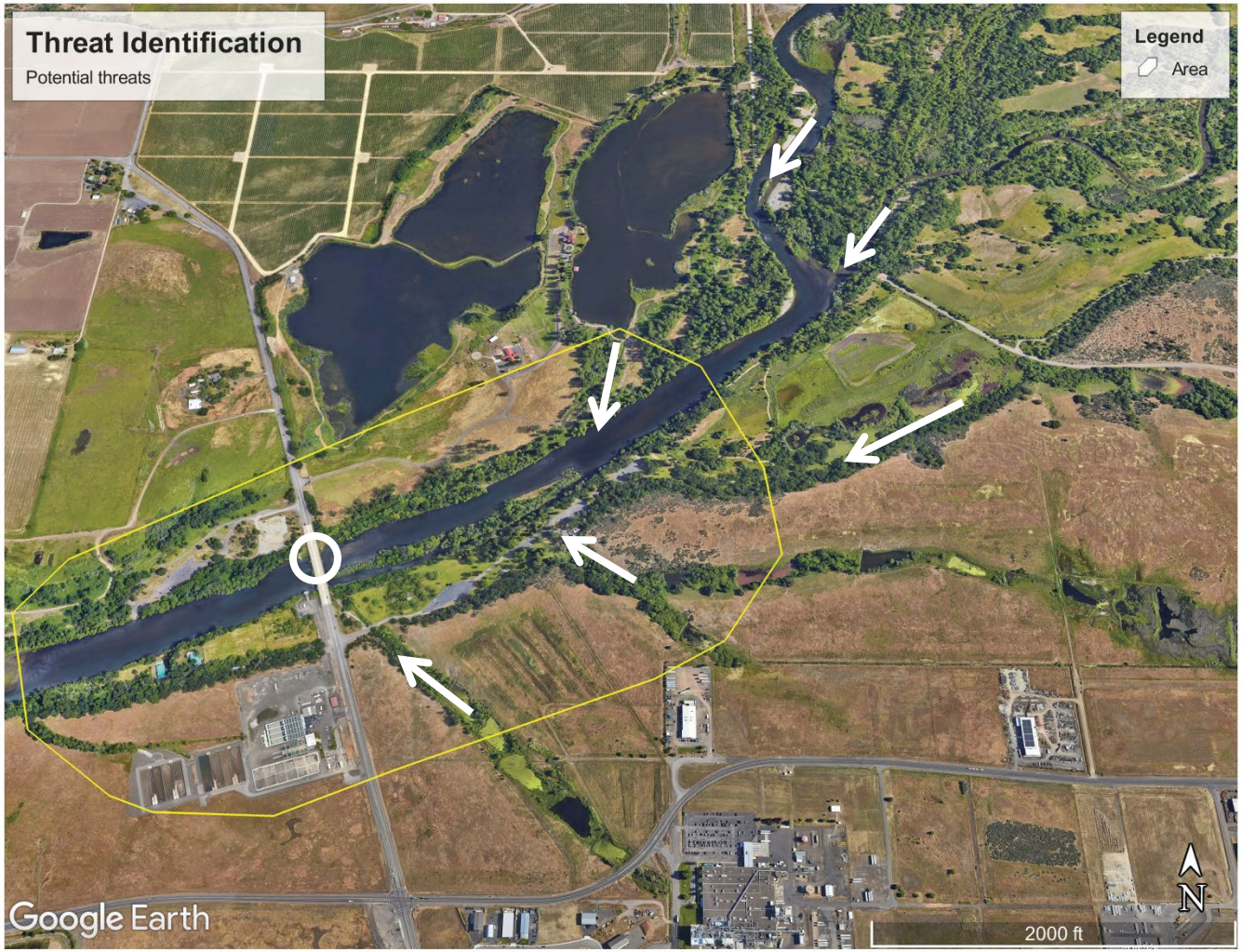
What are we evaluating?

- Features
- Threats
- Risk
- Control Strategies

Features Map

Critical and Response Resources

Threats


Threat Identification
Potential threats
Legend
Area
Google Earth
2000 ft
N

Threats - tributaries

Threats-Local conditions

Risk Assessment – Prioritizing Threats

$$\text{Risk} = L \times V \times C$$

RISK = T x V x C	Likelihood	Vulnerability [V]	Consequences [C]	
	5 Certain	5 Extreme	5 Catastrophic	
	4 Likely	4 High	4 Severe	
	3 Occasional	3 Significant	3 Critical	
	2 Seldom	2 Slight	2 Moderate	
	1 Unlikely	1 Low	1 Negligible	

1.0	THREATS / HAZARDS [T]	LIKELIHOOD	VULNERABILITY [V]	CONSEQUENCES [C]	Risk Rating
1		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
2		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
3		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
4		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
5		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
6		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
7		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
8		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
9		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
10		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
11		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
12		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
13		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
14		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
15		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
16		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
17		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
18		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
19		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	
20		5 4 3 2 1 N	5 4 3 2 1 N	5 4 3 2 1 N	

Risk Assessment - Threats

Scenarios

1	Spill coming down the mainstem of the Rogue above Little Butte Creek.
2	Spill entering the Rogue from Little Butte Creek
3	Spill entering the Rogue from White City drainage into Tou Velle System (Whetstone?)
4	Crash and spill on Table Rock Road Bridge Crossing
5	Spill coming from other drainage (e.g. ponds, tributaries, canals)

Risk Assessment

Threats/Hazards	Likelihood	Vulnerability	Consequence	Risk Rating Total (LxVxC)
1	3	5	4	60
2	3	5	4	60
3	4	5	4	80
4	1	4	4	16
5	1	3	3	9

Can potentially change vulnerabilities. Strategies would reduce system (water intake) vulnerability.

Control Strategy Site

Overall Response

Strategy Number 1
Table Rock Road Bridge Area

Response Objectives

- Diversion
- Protection/Exclusion
- Containment (storm drain input)
- Collection

Critical Resources to be Protected

- Medford Water Commission Drinking Water intake
- Rogue River

Location

- Table Rock Road near Tou Velle State Park

Description of Response Tactics

- Protect the water intake
  - Use containment booms to isolate the intake
  - Divert flows around side channel (2 locations for boom deployment)

- Use the diversion structures in the Tou Velle State Park System (MWC) for stormwater inputs to bypass flows below intake
- Protect the Rogue River. Isolate and contain the flow in Military Slough. Use equipment to collect materials.

Access Areas

- Boat Launch at Tou Velle
- Day Use Area for Tou Velle for White City Drainage Channels

Staging Areas

- MWC Offices
- MFR POTW/WWTP
- FD 3

Equipment Needs

- 1,000 feet of solid containment boom (protect intake, side channel 2 areas, plus extra)
- Boom deployment equipment and 12 buoys
- Fence posts with hammer to anchor booms

Watercourse Description

- Flow
- Width- maintstem just upstream of split at Tou Velle (310 feet). Max width of side channel = 105 feet

Control Strategies

Critical and Response Resources

Questions?

Mapping Exercise – Potential Locations

Initial Concept Draft

Revised Concept Draft

Draft Schedule

GRP

	2023				2024			
Task	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4
1								
2								
3								
4								
5								
6								
7								

Where?